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RESEARCH ACTIVITIES

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RECORD

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PLANT INDUSTRY STATION, BELTSVILLE, MD.

SEPTEMBER 1950

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Appropriations Reduced Almost 3 Percent

The tentative allocations to the Bureau under its main appropriation, salaries and expenses, total \$10,652,650 for fiscal year 1951. This compares with \$10,936,440 available in fiscal year 1950, exclusive of non-recurring funds for construction of a building at Woodward, Okla., a net decrease of \$283,790, or 2.6 percent. Most of the reduction in the Bureau's funds results from the tentative application of a provision in the 1951 General Appropriations Act that the total amounts be reduced by at least \$550,000,000.

The decrease for many lines of research work is greater than the net reduction would indicate. Three things account for this: (1) Congress earmarked some \$156,000 of the appropriation as increases for certain lines of work; (2) the necessity of meeting pay act costs for a full year in 1951 as compared with 8 months in 1950; and (3) all costs of within-grade salary advancements must be absorbed. Increased amounts for the current year were specified for repairs and reconditioning of physical facilities, preparation of soil maps, research on long staple cotton, gladiolus studies, and farm electrification investigations.

Included for the first time in 1951 under the salaries and expenses appropriation are activities previously financed by allotments from Sections 10(a) and 10(b) of the Research and Marketing Act, the Special Research Fund, the Soil Conservation Service, and Farm Housing. In 1950, these supplemental funds totaled \$2,358,300.

In 1951, the Bureau will continue to receive supplemental funds represented by allotments or transfers from Title II funds of the Research and Marketing Act, Research on Strategic and Critical Agricultural Materials, Forest Pest Control, the Point IV Program, Public Health Service, and Atomic Energy Commission, as well as by certain working funds. Full information has not yet been received on these funds. There will probably be decreases in some as compared with 1950, but there are also increases for investigations of plant sources of cortisone, hemp seed storage, survey of oak wilt, and for surveys and research on the production of abaca in Central America.

A Note on Military Deferment

Bureau employees in the military reserve have been asked by the Personnel Division to fill out a questionnaire on their reserve training and a Form 57 to bring their records up to date.

These will be used to ascertain those employees most likely to be called into service and to plan for replacements and requests for temporary deferment where the nature of the work makes this advisable.

The Department of Defense has announced it will consider delaying calls to active duty up to six months for those members of the reserves who are: (a) in critical occupations, and (b) in essential activities. Both criteria must apply.

Tentative lists drawn up by Commerce and Labor for deferment requests include practically all fields of science and engineering. Essential activities are those in the production of war materials, maintenance of such production, and maintenance of the national health, safety, and interest.

Secretary Brannan has named a committee headed by S. B. Herrell to advise and assist Department agencies on authorized deferment requests. The agency shall first obtain the approval of this committee before filing the deferment request with military authorities.

As the situation now stands, every request for deferment must be handled on an individual basis. It is extremely important that the supervisor be notified when the employee has definite information that he will be called into the service. Approximately 10 Bureau men with reserve status have been called to active duty during the past 60 days.

ASHS Presidential Address on Lily Improvement

How research is providing new and better lilies to aid a rapidly expanding bulb industry was described by Dr. S. L. Emsweller (F&VC&D) in the presidential address before the American Society for Horticultural Science at Columbus, Ohio, September 12.

Stressing advances in techniques for breeding improved varieties, Dr. Emsweller said that he and his associates at Plant Industry Station, Louisiana State University, and Oregon State College are using:

Recently acquired knowledge of lily cell structure to determine the parentage of established hybrids. This is the first time it has been possible to trace certain hybrid lines of unknown parentage back to the original crosses.

Advances in genetics to hybridize garden lilies. One of the most beautiful crosses now under test is a hybrid between the Auratum and Speciosum lilies. The first hybrid between these two species on record was obtained in 1869 by Francis Parkman, the historian. Later all of his stock was lost when the bulbs rotted.

Feed Production in the Southeast

If we could muster research and extension emphasis on forage crops comparable to that already in force in cotton and tobacco, the South could produce enough feed to support a profitable livestock industry three times as large as the present one, Dr. Robert M. Salter, chief of the Bureau, told North Carolinians attending Farm and Home Week at Raleigh, August 3.

He stressed the need for research on crops and practices that make full use of the abundant rain and sunshine in the region throughout the year. This calls for the development of better plants for seasonable pastures that dovetail into each other to produce lush year-round grazing; supplementary grain crops for these pastures; insurance crops to tide livestock over short periods of drought in summer or abnormally cold periods in winter; plants that will thrive at low temperatures; warm weather grasses and legumes that are high in nutritive value; new deep-rooted perennial legumes superior to those now grown; perennial legumes for poorly drained soils where deep-rooted crops will not grow.

Dr. Salter says we need more information on the best teammates of grasses and legumes for the Southeast. He thinks more emphasis should be given to the development of improved fertilizer practices; precision methods for planting that will reduce high seeding rates; more suitable equipment for seed harvesting; and improved methods for storing feed grains so as to reduce losses from insects and mold. Most soils in the Southeast respond to fertilization and other good management practices. These soils can be built up and maintained at levels of productivity that compare well with soils of the Midwest where feed crops are produced efficiently.

Oak Wilt Widely Distributed in Ozarks

A survey in which affected trees are spotted by aerial observers shows that oak wilt, Chalera quercina, a serious disease of forest trees, is now widely distributed in southern Missouri and has reached the northern tier of counties in Arkansas.

Reporting on preliminary findings of the study now in progress in the Ozarks, Dr. T.W. Bretz (FP) told the Railway Tie Association recently that results underscore the need for a vigorous research program to find controls. The Missouri and Arkansas State Forestry Divisions, the Missouri Agricultural Experiment Station, the U.S. Forest Service, and commercial forest interests are cooperating in the study. Results show trained aerial observers can identify oak wilt with considerable accuracy. Suspected diseased oaks are noted on a map. Ground crews check the trees. Specimens are sent to the laboratory at Columbia, Mo., for cultures.

A striking discovery to come out of this survey is that giant oaks are the first to be attacked by the disease. Isolated infected trees at scattered locations are either the dominant or co-dominant tree in the stand. This suggests that the causal fungus is carried by some agent flying over the forest canopy. But this agent has not been identified. There is no evidence that the spores are spread by wind.

2,4-D Produces Potassium Nitrate in Certain Crops

New insight into how 2,4-D treatments for weed control may, in some cases, be the indirect cause of livestock poisoning is reported by Dr. I.M. Stahler (Weed Control) and E.I. Whitehead, associate chemist of the South Dakota Experiment Station. Their report is based on preliminary findings in an analysis of sugar beet tops sprayed with a mixture, which had accidentally been contaminated with 2,4-D.

While it is definitely known that 2,4-D sprayed directly on grass is not poisonous to livestock, it now appears that the chemical may affect certain other crops and weeds in such a way as to make them produce large amounts of potassium nitrate. In the digestive system of cattle this becomes nitrite. It may cause death within a few hours.

These findings appear to explain cases of cattle poisoning that have been reported since 2,4-D came into wide use. Further study is needed to establish the reaction of various weeds and crop plants to the chemical--with special emphasis on the accumulation of potassium nitrate in treated plants likely to be post-grazed.

The first clue came in 1946 from the observations of a Canadian veterinarian called in to treat stricken cattle. They had eaten sugar-beet tops from malformed plants that had been affected by 2,4-D drift from adjacent wheat fields. Following the vet's diagnosis of nitrite poisoning, chemical analysis of the beet leaves showed potassium nitrate levels far above that known to kill cattle.

Other research by South Dakota workers indicates that potassium nitrate may be produced in certain plants at different stages of growth, particularly during drought. Among these are spider wort, pigweed, lambsquarter, gumweed, corn, and proso millet.

Cotton Defoliation Progress Report

Guides for the use of available defoliants--with preferred rates for each of the ecological regions in the Cotton Belt--are given in the report of the 1950 Cotton Defoliation Conference, an annual invitation meeting of USDA, State and industry workers under the sponsorship of the National Cotton Council.

Prepared by a steering committee of which Dr. W.H. Tharp (C&OFC&D) was chairman, the 1950 report includes comprehensive background information from last year's report revised in the light of 1949 findings.

Bureau personnel and collaborators who have contributed material and helped prepare the report are: G.J. Harrison, E. Gordon Smith, and Vernon L. Hall, California; Vilas T. Walhood and R.H. Peebles, Arizona; Harry R. Carns and William E. Meek, Mississippi; D. M. Simpson, Tennessee; Don L. Jones, Texas; C.B. Haddon, Louisiana; and A.L. Smith, Alabama.

New Clovers in Wide Use

Nearly half of the crimson clover seed produced in the South this past spring was of the reseeding or volunteering Dixie, Auburn, and Autauga varieties. Although total acreage planted to these reseeding types is not known, it is far greater than the 51,000 acres harvested for seed (with a little below average yield of $6\frac{1}{2}$ million pounds).

The new varieties have been available only since 1944. They come from research started in 1936 by the Division of Forage Crops and Diseases. Bureau workers collected many lots of crimson clover seed from farms on which the crop had been grown from seed produced on that farm for 10 years or more. These were tested (in cooperation with several southern experiment stations) for ability to reseed or volunteer in the fall from seed shattered the previous spring. Three lots were selected from these tests and combined to form the Dixie variety. More recently the Auburn and Autauga strains have been identified and increased in Alabama.

Increasingly popular in the South for spring and winter pasture, hay, and winter cover for soil improvement, the new crimson clovers are being grown alone and in mixtures with Bermuda, Dallis, Johnson, and other southern grasses, small grains, sericea lespedeza, and kudzu.

Where adapted, one of the best combinations for year-round grazing is Dixie crimson and Coastal Bermuda grass. This has been used in several places for more than 5 years without additional clover seeding. In the summer the surplus grass is cut for hay and used as supplemental feed during periods of drought when clover seedlings are getting a start or when cold weather has retarded growth. Experience shows that crops of sorghum, Sudan grass, or late planted corn can be grown successfully following the maturing of a seed crop of crimson clover.

The new reseeding varieties are not resistant to crown rot and sooty blotch. These diseases are increasing with the continued growing of crimson clover in the same fields through natural reseeding. As yet no crimson clover varieties resistant to these diseases are available.

Another Record Year for Fertilizer

A new record for plant-nutrient consumption was established in 1948-49 for the 10th consecutive year. The total consumption was 18,541,685 tons containing 919,946 tons N; 1,941,709 tons P_2O_5 ; and 1,073,073 tons K_2O . Compared with 1947-48, this was an increase of 4.1 percent in the quantity of fertilizer, 8.4 percent in total plant nutrients, 7.4 percent increase in N, 4.6 percent in P_2O_5 , and 16.5 percent in K_2O .

Non-farm use (lawns, turf, ornamental trees and shrubs, and urban flower and vegetable gardens) accounted for 1.9 percent of the total fertilizer consumption in the United States for the year ending June 30, 1948.

Good News for Grassland Farming

Impressive gains have been made in the supplies of certified seed of improved forage varieties this past year, says C.S. Garrison (FC&D), executive secretary of the Foundation Seed Program.

Sixteen percent more certified alfalfa seed was available in 1950 than ever before. A large portion of this increase was in the Ranger and Buffalo varieties. The 1950 supply of 2 million pounds of Ranger seed was nearly double that of 1949. Prospects indicate that the 1950 plantings will provide 4 to 5 million pounds of Ranger seed for 1951 plantings.

The outlook on Buffalo alfalfa is equally encouraging. Ninety-eight percent more certified seed was available in 1950 than the year before. An increase of 100 percent is in prospect for the coming year.

Mr. Garrison reports that the supply of certified seed of improved clovers has been upped 74 percent this year. Most of this was in Ladino clover and the reseeding crimsons. The supply of Ladino certified seed jumped from not quite 800 thousand pounds in 1949 to more than two and a half million pounds for 1950 plantings. Three-fourths of this came from Oregon, 95 percent from Oregon and California. Nearly 87 percent of the reseeding crimson clover is the Dixie strain.

Certified seed of improved grass varieties for planting in 1950 was 13.3 percent over the 1949 supply. Major increase was in the Southern type bromegrasses, tall fescues (Alta and Kentucky 31), and Sudan grasses. Nebraska produced 54.8 percent of the certified Southern type bromegrass seed; Oregon 92.3 percent of the Alta fescue; and Kentucky, 84.2 percent of the certified Kentucky 31 fescue. New Mexico, California, and Nebraska were the "Big Three" in the production of certified Sudan grass seed in 1949.

New Equipment Aids Potato Nutrition Studies

G.V.C. Houghland (F&VC&D) has devised solution culture equipment for studying the effects of nutrition on the susceptibility of potatoes to injury by insects and diseases.

He used 30-gallon vitrified earthenware tanks for which he has designed a plywood cover with a removable wooden compartment (15" x 15" x 4") attached to the underside. Nylon or lumite screen (1/4" mesh) in the bottom of the compartment holds the tubers but allows the roots to reach the nutrient solution about an inch below. The tuber compartment filled with sphagnum moss has removable sides which permit access to the growing tubers without disturbing them. The potato plant grows through a 2-inch opening in the cover and the foliage is supported by strings fastened to a dowel inserted in the plywood top.

The solution, which is continuously aerated through perforated glass tubing, can be sampled at any time or siphoned off entirely and replaced. Calibrated float gages indicate when additional water is needed to maintain the desired solution levels.

More Careful Processing Needed for Seed Beans

The new, high quality, less fibrous snapbean varieties require special care in threshing and cleaning to obtain seed of high germination.

In a preliminary report to commercial cooperators in an RMA study of processing phases of seed beans, Dr. E. H. Toole (F&VC&D) notes that Top Crop and Logan averaged slightly lower in germination than seed of Tender-green and appreciably lower than seed of the fibrous-podded varieties--Stringless Black Valentine and Bountiful. But sample lots of newer varieties that had been given special care in processing germinated well.

The 2-year study indicates that both threshing and cleaning contribute to the number of injuries. The damage shows up not only in poorer germination but also in slightly-injured seedlings. Cleaning resulted in a definite increase in the number of these seedlings and a less marked but measurable reduction of germination.

In the first year's results, hand picking (the final operation in processing where cracked and broken seeds are removed) also increased the number of injuries. This did not show up in the 1949 results, possibly because the cooperators whose samples had the greatest damage from this source in 1948 had remedied their handling of the seed on the basis of the findings.

Because factors such as time of harvest, weathering, resistance to impact, moisture and so on cannot be separated in these studies of commercial seed, Dr. Toole plans to use selected samples with a minimum of mechanical injury in the next phase of the study. He is spending a month in Twin Falls, Idaho--center of the area where much of the commercial seed bean crop is harvested--to collect the samples.

Some Cotton Varieties More Resistant to Thrips

W.W. Ballard (C&OFC&D) reports data showing highly significant differences in the susceptibility of upland cotton varieties to injury to thrips. This difference appears to be associated with hairiness in young leaves.

For example Empire, Collins, Stoneville, Coker 100, and Coker 100 Wilt have shown consistently high resistance. Hi-bred and several strains of Stoneville and Deltapine--smooth leaf varieties that lend themselves well to mechanical picking--have been highly susceptible.

Thrip injury can be a serious hazard in cotton. It delays fruiting and cuts yields and in severe cases often causes abortion of terminal buds and kills young plants.

The index developed by Mr. Ballard in tests at Experiment, Ga., should be useful to breeders in evaluating new material.

New Key to Mottling in Soils

As a step toward standardizing soil descriptions to allow more nearly precise exchange of information among soil scientists, Dr. Roy Simonson (SS) has drawn up a proposed system for describing mottled colors in soil horizons briefly and accurately.

He suggests that in ordinary field notes the description be made in terms of contrast, color, number, and size. He would have the observer first record the general impressions of color with names such as those adopted by the Soil Survey Division.

Under the proposed system contrast would be described as faint, distinct, or prominent. The number of mottles in the horizon would be indicated in relative values such as few or scarce if approximately a fourth or fifth of the exposed surface is mottled, common or some, when more than a fourth but less than half is mottled, and many or numerous when half to three-fourths of the area is involved.

Dr. Simonson suggests that mottle size be based on the approximate diameters of the color patches and referred to as fine when this is less than 5 mm, medium from 5 to 15 mm, and coarse, for a diameter of more than 15 mm.

This system was devised by Dr. Simonson for use in Iowa in regions of Gray-Brown Podzolic and related soils. It has also been applied to Red-Yellow Podzolic soils and Latosols as well as other zonal and a number of intrazonal and azonal groups.

A sample description of Tyler silt loam would be limited to the following: B-3 horizon-mottled light yellowish brown, light olive brown, strong brown, and reddish-yellow silty clay loam. Mottles are fine to medium, prominent and numerous.

Dr. Simonson would note boundaries and shape and form of the mottles only in striking instances or in detailed morphological studies.

Grass Seed Presented by New Zealand Farmers

The Bureau's part of the 2,500 pounds of grass and legume seed sent to this country by New Zealand for grassland improvement will be tested as pasture mixtures at Beltsville and for rust resistant winter pasture at Mississippi State College, says M.A. Hein (FC&D).

The seed includes the new hybrid rye-grass H-1, annual and perennial rye grasses, orchard grass, chewings fescues, browntop bent grass, red and white clover, and rape, which is used for pasture in New Zealand. Furnished by the Federated Farmers of New Zealand, it was brought to the United States by R. B. Tennent, assistant director-general of the New Zealand Department of Agriculture as a gesture of goodwill. Mr. Hein and other Bureau workers assisted Mr. Tennent in selecting other locations where the seed could be sent for trial.

Research Will Aid Precision Production

A panel of specialists in cotton and allied fields has tackled the problem of planning research that is expected to lead eventually to the establishment of crop log guides for precision production.

At the first meeting of the panel at Beltsville, June 26-28, it was decided: (1) to develop specific and detailed plans for fundamental investigations of the exact influence of each environmental factor on production and quality of cotton; and (2) to plan the research so the information will lead to the establishment of crop log guides enabling the grower to take full advantage of all favorable factors and to lessen or to overcome the unfavorable ones.

W.H. Tharp is chairman of the panel. Members are H.D. Barker, Thomas Kerr, P.B. Marsh, John T. Presley, David R. Ergle, and H.E. Joham, all of the Cotton Division; M.A. McCall and F.W. Parker, assistant chiefs of the Bureau; David D. Mason, biometrician; Russell Coleman, director of the National Fertilizer Association; R.Q. Parks and C.H. Wadleigh (Soils); Neil W. Stuart and M.W. Parker (F&VC&D); W.H. Garman, Office of the Experiment Stations; and Charles Sayre, former head of the Cotton Division, now with the Delta Pine Land Company.

The panel will be permanent. The proceedings will include all background discussions as well as the accepted outlines of experimentation.

Editors of Fungi Series Mark Milestone

Almost 200 species belonging to more than 100 genera are represented by the 500 specimens of host plants in the "Myriangiales selecti exsiccati," a series edited jointly by Dr. Anna E. Jenkins (Mycology) and Dr. A. A. Bitancourt, director of the Biological Institute, Sao Paulo, Brazil.

In a paper for the Fifth International Congress for Microbiology in Rio de Janeiro recently, Dr. Jenkins and Dr. Bitancourt recalled that the project was first announced in that city in 1938 at the Primeira Reuniao Sul Americana de Botanica.

In the 12 years since that time, they have obtained material for the series from all over the world. While most of the specimens are from North and South America, some of them come from Europe (Ireland, Norway), Asia (Formosa, India), the Pacific Islands (Guam), Australia (New South Wales, Queensland), and Africa (Rhodesia, Tanganyika, Uganda, Union of South Africa).

Dr. Jenkins and Dr. Bitancourt have compiled the material in 10 fascicles of 50 specimens each and prepared a general index giving the genera and species of Myriangiales, their hosts and host families, and the names of the collectors and contributors. The 10 complete and 15 partial sets of the series have been distributed to herbaria in Argentina, Australia, Brazil, Canada, Chile, Costa Rica, Denmark, England, France, Sweden, Switzerland, Transvaal, and the United States.

Supplement Lists New Plant Diseases

Reported for the first time in this country in 1949 were:

- (1) Septoria leaf blight on broomcorn in Illinois;
- (2) Cladosporium herbarum on wheat in Kentucky;
- (3) Sugarbeet mosaic on annual yellow sweet clover, crimson clover and redroot amaranthus in California;
- (4) Anther mold on red clover in Oregon and Washington;
- (5) Yellow patch on Ladino clover in the Northeast;
- (6) Dodder galls on Tahiti lime in Florida;
- (7) Rasp leaf on sour cherry in Colorado;
- (8) Gray mold on Flameray gerbera in the Pacific Northwest;
- (9) Leaf spot on garden stock in California.

These are listed in new or noteworthy plant disease records and outstanding developments compiled by Nellie W. Nance and published as supplement 194 of the Plant Disease Reporter.

The record shows that 1949 was a severe blue mold year for tobacco. Again there appears to be a high coincidence between the intensity of blue mold and above-normal January temperatures in the tobacco growing areas. In 1949 plant diseases caused the greatest losses in history to small grains in Texas. Stripe caused serious injury to barley in California. Kansas wheat was damaged by mosaic of the Western type. The destructive oak wilt became more widespread. Surveys indicate the elimination of the canker disease of citrus.

Part-time Teachers

Sixteen Bureau employees are serving as faculty or committee members of the USDA Graduate School. Dr. A.H. Moseman is a member of the GS council and chairman of the department of biological sciences. Dr. C.E. Kellogg is a member of the department of physical sciences; and H.W. Whitlock is a member of the committee on surveying and mapping.

Faculty members from the Bureau who are teaching courses this year are Dr. R.L. Lovvorn (Advances in Weed Control); Dr. M.W. Parker (Recent Developments in Plant Nutrition); Dr. C.C. Nikiforoff (Soil Physics); Harry L. Garver (Principles of Refrigeration); Earl Sharer (Administrative Procedure); and Marguerite Gilstrap (Official Writing). Scheduled for the spring semester is a course by Dr. S.B. Hendricks (Radioisotopes and High Energy Radiation in Biology). Listed in the catalog to teach courses in 1951-52 and alternate years are: Dr. F. P. Cullinan (Recent Developments in Plant Physiology); Dr. F.J. Stevenson (Advances in Plant Breeding and Genetics); John C. Dunegan and Dr. M.C. Goldsworthy (New Developments in Fungicides); Dr. R.Q. Parks (Soil Fertility and Management); and Dr. Sidney Blake (Systematic Botany).

Fertilizer Papers Available

"Phosphate Resources and Manufacture in the United States" by K.D. Jacob;
"Fertilizers for Special Uses" by A.L. Mehring (F&AL) given at the short course in fertilizer technology conducted by the Soil Science Society of America at the University of Maryland in August.

Forage Leader from Ohio State

Dr. David F. Beard assumed his duties as principal agriculturist and assistant head of the Division of Forage Crops and Diseases, June 27. He will serve as liaison between the Forage Division and agencies in USDA and the States, which incorporate research findings into action programs.

Dr. Beard comes to the new post with a wealth of experience for this type of work. In agronomy extension at Ohio State since 1939, he has served as project leader of the work for the past 3 years. He spent 6 months in 1948 making a study for FMA on seed marketing methods that best maintain varietal purity of new grasses and legumes.

Active in the International Crop Improvement Association, during the past 10 years Dr. Beard has served as director from Ohio, chairman of the committee on cooperation with the seed trade, general seed certification, foundation seed, and soybean improvement, and as a member of the executive committee. He has made an outstanding contribution through his work to develop interstate certification that will facilitate the movement of large volumes of certified seed from producing to consuming areas.

Dr. Beard holds the BS and PhD degrees from Ohio State University.

Two Pathologists Transfer to Beltsville

Dr. Kermit Kreitlow is new project leader in research on the diseases of forage crops. Trained at Minnesota and Louisiana State, he has been located at the Regional Pasture Laboratory, State College, Penn., since 1931. There he has made an outstanding contribution in research on Sclerotinia crown rot (cause of the so-called winterkilling in Ladino clover) and Fusarium root rot in red clover. With the aid of his findings, breeders have now obtained plant material resistant to these diseases.

Dr. John T. Presley, who began his work for the Bureau in 1929 in rubber investigations at Chapman Field, Fla., heads up research in cotton diseases. He comes to Beltsville from State College, Miss., where he has been stationed since 1945. Prior to that he carried on field investigations on the biological control of cotton root rot fungus and other phases of cotton diseases at Sacaton, Arizona, and on guayule at San Antonio, Texas, Sacaton, Salinas, California, and Raymondville, Texas. He holds degrees from the universities of Maryland and Minnesota.

New Grass Does Well in Arkansas

When well established, Coastal Bermuda grass will carry two cows to the acre during the growing season in central Arkansas, according to Walter S. Harper, Sheridan, Ark. Five years ago Mr. Harper obtained a small quantity of sprigs of this new grass developed by Bureau plant breeders in cooperation with the Coastal Plains Experiment Station. In a letter to the Georgia Station, Mr. Harper says he believes the grass holds great promise and it is being increasingly used in pastures in his State.

Superintendent at Glenn Dale

John L. Creech, for the past two years PEI specialist in ornamental plants, has been named superintendent of the Plant Introduction Garden, Glenn Dale, Md. He succeeds the late Frederick C. Bradford.

Mr. Creech came to the Bureau in 1947 from Amherst, Mass., where he had been a graduate student and served for one year as an instructor. He is a native of Rhode Island and holds a BS from R.I. State College. During the war he served as a captain in the army infantry.

At Glenn Dale he will propagate and test plant introductions and have charge of special quarantine work for the Division. The Plant Introduction Garden consists of 70 acres, 10 greenhouses, 2 quarantine houses, and a seed storage facility. It is the primary testing station for plants introduced in the Northeast.

Leader in Sugarcane Research

New leader for all sugarcane and sugar sorghum projects is Dr. George Arceneaux, who comes to Beltsville from the Houma, La., field station.

A native of Louisiana, Dr. Arceneaux is a graduate of Southwestern Louisiana College and holds advanced degrees from Peabody and Cornell. Before entering Federal service in 1928, Dr. Arceneaux worked 3 years as a county agent and 2 years as manager of a sugarcane and cotton plantation.

At Houma Dr. Arceneaux has conducted research in all phases of sugarcane agronomy. The present wide use of 2,4-D to control alligator weed and tie vines in cane fields is based on his findings. In 1946 and again in 1948 Dr. Arceneaux surveyed agronomic potentialities of sugarcane in Mexico at the request of the government of that country.

Dr. Ernest V. Abbott succeeds Dr. Arceneaux as superintendent of the Houma station. A graduate of Oregon State, Dr. Abbott holds the MS and PhD degrees from Iowa State College. He spent 3 years in Peru with the Sociedad Nacional Agraria at Lima before taking a position on the staff at the Houma station in 1930. For the past 20 years he has studied sugarcane diseases, particularly root rots, red rot, and the virus disease, chlorotic streak.

Peach Breeders Confer

Fourteen peach breeders from 9 States came to Beltsville, August 11 for a 2-day conference arranged by Dr. Leon Havis, V.E. Prince, and Dr. G.M. Darrow (F&VC&D). During their stay the visitors inspected the peach variety orchards, seedlings, and selections at Plant Industry Station and Round Hill, Va.

Among problems discussed were: (1) the outlook for canning and freezing varieties to be developed in Federal-State research; (2) improvement of early ripening varieties and their place in the commercial program; (3) the role of late-ripening varieties in breeding work and the emphasis to be given in developing them for various regions in the country; and (4) most effective methods by which State and Federal workers can exchange peach breeding information.

Eaton Back from Haiti

Dr. Frank M. Eaton (C&OFC&D), College Station, Texas, has returned from a 10-weeks' assignment in Haiti where he studied possibilities of reclaiming approximately 90,000 acres of swamp land by irrigation. This was an FAO assignment.

* RETIREMENTS *

Earl D. Fowler, principal soils correlator in charge of soil surveys for the Northern region, retired June 30 after more than 30 years of service. A graduate of Earlham College, Mr. Fowler entered the Soil Survey Division in September 1917. He was among Bureau technicians who helped inaugurate the work of the Soil Conservation Service and served with that agency from 1936 to 1942. He has returned to Albany, Ga., where he was in charge of the soil fertility laboratory from 1931 to 1935, to make his home.

August L. Nelson (Soils), whose 32 years of government service were spent at the Archer Field Experiment Station, Cheyenne, Wyo., retired June 30. In tribute to Mr. Nelson's work as superintendent of the Station from 1918 to his retirement, Director J.A. Hill of the Wyoming Experiment Station said, "The prosperous dry land agriculture in southeastern Wyoming will be a monument to your accomplishments."

Leslie L. Zook (Soils) retired June 30 after 42 years of service, 36 of them in dry land research at North Platte, Neb. A graduate of the University of Nebraska in the Class of '96, Mr. Zook began work for the Bureau in 1908. He served as superintendent of the North Platte Station from 1935 to 1946.

Dr. Julius Matz (SPI) retired July 31. He began his work for the Bureau in 1916 as an inspector in citrus canker eradication on a part-time basis and continued to serve as an agent or a collaborator until 1929 when he joined the Division as a full-time pathologist. A native of Lithuania, Dr. Matz is a graduate of Massachusetts State College and Johns Hopkins University. He has traveled extensively in Europe and Latin America in his work on sugarcane mosaic and other diseases. For the past few years he has been stationed at the Canal Zone. Dr. Matz will make his home at Topsfield, Mass.

Miss Helena E. Spraker, who began her government career as a stenographer in the office of Dr. David Fairchild, retired July 31 after 39 years of service. For the past 8 years, Miss Spraker has served as administrative assistant to Dr. Robert M. Salter, chief of the Bureau. She plans to continue to make her home at 3426-16th St. N.W., Washington, D.C.

 * PUBLICATIONS *

Recent Bureau Press Releases

Copies of the following releases may be obtained from Press Service,
 Office of Information, U.S. Department of Agriculture, Washington 25, D.C.

<u>Date</u>	<u>Subject</u>
June 19	Low costs in shelled-corn drying tests reported by USDA engineer - USDA 1492-50
June 30	Southern weed (Johnson grass) building resistance to 2,4-D - USDA 1611-50.
July 16	Scientists gain time in rubber experiments - C.S. 1580-50
July 16	Shadow builds substance in tung orchards - C.S. 1580-50
July 17	Two clingstone peach varieties extend canning season - USDA 1744-50
July 25	New sugarcane adapted to mechanical harvesting - USDA 1822-50
July 17	Barker heads USDA research on cotton crops and diseases - USDA 1742-50
July 28	Portable, pneumatic cottonseed loader devised by USDA engineers - USDA 1862-50
July 31	Mustang, hardy oat variety for Texas, released - USDA 1875-50
July 31	Salter reports on bright future for feed production in the South - USDA 1854-50
August 3	Opportunities for feed production in the South - USDA 1855-50
August 16	Auto is protection against lightning, says USDA bulletin - USDA 2022-50
August 20	Hybrid cotton coming but probably not soon - C.S. 1903-50
August 23	Shippers save in simple ways developed by USDA research - USDA 2072-50
August 24	Oak wilt widely distributed in Ozarks, USDA Pathologist Reports - USDA 2086-50
September 10	Nematode studies uncover weak points - C.S. 2093-50

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Leaflet 281	-	Pointers on Making Good Lawns
Leaflet 287	-	Farmhouse Plans for Minimum Budgets
Circular 838	-	Role of Fungi in the Heating of Moist Wheat
Circular 833	-	Synonymy of Orange-Fleshed Varieties of Carrots

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Circular 841	- -	Cooperative Studies of the Delayed Harvesting of Sweetpotatoes
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Technical Bulletin 1007	-	Crop Rotation and Tillage Experiments at the North Platte (Nebr.) Substation 1907-34
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Soil Survey	- -	Morgan County, Indiana
Soil Survey	- -	Cumberland County, Tennessee
Soil Survey	- -	Midland County, Michigan
Soil Survey	- -	Franklin County, Indiana
Soil Survey	- -	Tama County, Iowa
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